THE PLANT PRESS

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Lobelias—Beautiful Components of Our Fall Flora

The almost unnaturally brilliant red of the cardinal flower in wetlands in late summer draws attention to their genus, *Lobelia*. The lobelias are in the Campanulaceae or bellflower family, a rather small family whose flowers, ironically, are mostly blue, the cardinal flower (*Lobelia cardinalis* L.) being an exception. The other two genera in the family that are commonly found in our region are *Campanula*, the bellflowers, and *Triodanis* (formerly called *Specularia*), the Venus' looking-glass, a somewhat weedy winter annual familiar in lawns and gardens. At first glance, neither of these looks much like the lobelias in flower, and in fact the family is divided into two subfamilies, the bluebells or bellflowers (not the same as Virginia bluebells) and the lobelias.

The lobelias have a tubed, two-lipped flower, with two narrower lobes or "ears" above and three wider lobes below. A closer look will reveal an interesting structure: there is a split in the corolla tube through which emerges a tube formed by the united stamens (male flower parts). In the cardinal flower and some other species, this tube has a tuft of white hairs at the tip. After the pollen is shed, the style and the stigma (female flower parts), with its branches folded together, emerge through this tube.

The genus is named for Mathias de l'Obel (1538-1616), Flemish botanist and physician to James I of England during a period in history when botany and medicine were closely connected through the medicinal uses of plants. Lobelias have an acrid milky or yellow-milky sap, and many of them are toxic and/or have medicinal uses. For example, great blue lobelia (*Lobelia siphilitica* L.) is given its scientific name for its supposedly curative properties in that disease. Indian-tobacco (*Lobelia inflata* L.) contains lobeline sulfate, which has been used in anti-tobacco therapy, and the plant also has been used as a stimulant, antiasthmatic, and expectorant in cases of bronchitis.

All species of lobelia have been used historically for multiple disorders by Native Americans and in folk and herbal medicine. But they can be toxic and even deadly—widespread use of Indian-tobacco in the 1800's, for example, resulted in numerous deaths. Its other common names—gagroot and pukeweed—make it easy to follow the advice of herbalists today who discourage the use of this and all other lobelias.

The three species mentioned so far are among those most widely distributed in Tennessee and in the eastern half and mid-western regions of country as a whole, the others being pale-spike lobelia (*Lobelia spicata* Lam.) and downy lobelia (*Lobelia puberula* Michaux). (The first three must have been known in Europe early in the history of plant classification, as the "L." in their names gives Linnaeus, the father of scientific classification, as the authority for those names.) There are numerous other species, of course—in North America, there is at least one species of lobelia present in every state and almost all the provinces of Canada, and many more species occur in Latin America. The southern states have the greatest diversity of species. Very few species in North America are exotics (non-native), but a surprising number are endemic to a single state (i.e. are found nowhere else), particularly Hawaii.

Look for the cardinal flower and the great blue lobelia in low woods and wet meadows and along stream banks. The color of the cardinal flower, named for the similarity to the color of the robes of a Roman Catholic cardinal, is unmistakable. The great blue lobelia is the largest blue species, and the flower is striped with white on the lower lobes. The downy and pale-spike lobelias are found in drier meadows and woodlands. Indian-tobacco is the commonest lobelia, occurring in fields, roadsides, gardens, and other open areas. The inflated flower base, which develops into a swollen seedpod, is conspicuous.

—Yolande Gottfried

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Illustration: Cardinal flower

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Exotic Pest Plant Council Symposium

The 2002 Southeast Exotic Pest Plant Council Symposium will be held in Nashville, Tennessee, Wednesday, April 3, through Friday, April 5, 2002, at the Renaissance Hotel. Objectives of this interdisciplinary conference are to: 1) exchange information and technology leading to cost-efficient management of invasive exotic species in natural areas; 2) provide a forum for participants to develop networks of mutual assistance; and 3) facilitate interdisciplinary dialog between policy makers, land managers, and researchers. Updates on the symposium, a registration form, a call for papers, and an agenda will be posted at the SE-EPPC web site, www.se-eppc.org.

From the Editor

We have a special treat coming up this fall. Kathryn Ramseur-Riley, artist and daughter of our Director *Emeritus* George Ramseur, is creating a drawing for us to use as the "logo" for the Herbarium's Search for the Big Trees project. The drawing will be unveiled at our open house during Sewanee's Homecoming Weekend, October 19. The Ramseur clan has made a generous monetary donation to the Herbarium in George's honor to support the Big Trees project. The Search has garnered a great deal of interest locally, including a wonderful write-up in the *Chattanooga Times Free Press*. George and Sandy Baird have done a tremendous job in raising awareness of these monarchs in our midst.

We received two interesting letters recently. The first is from Friend of the Herbarium and Sewanee alumnus Dr. Jim Scheller who e-mailed in June from Larkspur, California:

"I enjoyed the recent *Plant Press* newsletter, and especially the articles about the Great Tree hunt. What a neat idea. A book I think you might like is, *The Attentive Heart: Conversations with Trees*, by Stephanie Kaza, Shambhala Publications, 1993, ISBN 1-57062-251-5. It is a lovely written book about a woman who communes with different trees and finds out what messages they have to give us.

"I was interested in Collection Highlights, part II. Record number 1000, *Plantago lanceolata* (also known as Whiteman's Footprints by the Native Americans because it likes disturbed ground-where the whiteman has walked), although considered a "weed" and an undersirable lawn plant is actually a useful medicinal plant. The leaves, when mixed with saliva, are good for treating skin problems, cuts, poison ivy, etc. The seed husks of *Plantago* is psyllium and is used in Metamusil and other products for constipation. The root is a Chinese herb and is used in formulas to "drain dampness". All in all, not a bad weed, I would say."

The second e-mail was from Vicki Funk, Research Scientist and Curator of the National Herbarium of the Smithsonian Institution. She had heard of this newsletter and wrote to say that they, too, have a quarterly newsletter titled *The Plant Press*. She put us on their mailing list and asked us to do the same for them.

Vicki heard about us as a result of a meeting of herbarium curators at the Association of Southeastern Biologists' April meeting in New Orleans. Botanist Zack Murrell of Appalachian State University had organized a symposium, at which Vicki gave an invited talk on Herbaria of the Southeast. The latest issue of that "other" *Plant Press* (Vol. 4, No. 3) arrived late this summer. A page-one article mentioned former National Herbarium fern curator, William Maxon. We have records of Dr. Maxon's visiting our local Marion County, TN, population of the rare hart's-tongue fern around the year 1900. Small world!

Our two publications are quite similar, with articles on plant groups, conservation, and staff activities. Of course their research interest is worldwide, whereas we concentrate on the South Cumberland Plateau and Eastern Highland Rim of Tennessee. The National Herbarium's *Plant Press* is provided free of charge by contacting Shirley Maina at maina.shirley@nmnh.si.edu.

—Mary Priestley

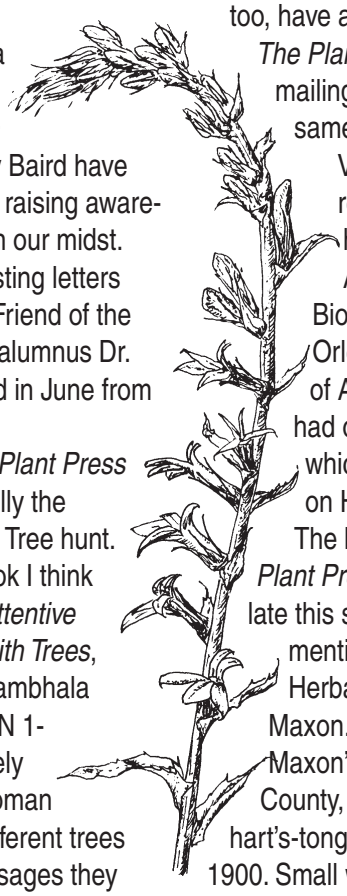

Illustration: Great blue lobelia

Autumn Calendar of Events

Lake Cheston
Sun., Sept. 23, 1:30 p.m. Yolande Gottfried
Investigate the abundant and varied flora in and around one of the lakes on the Domain. Expect to see lobelias, asters, Joe-Pye-weed, and possibly turtlehead and ladies' tresses orchids. Meet at the pavilion. Easy.

Shakerag Hollow
Sat., Sept. 29, 1:30 p.m. George Ramseur
The two-mile Shakerag Hollow trail descends through a cove hardwood forest known for its high diversity of plant species. Termed "mixed mesophytic" by botanists, this forest type boasts an unusually diverse group of trees. Meet at Green's View. Two miles, moderate.

Invasive Exotic Pest Plants
Sun., Sept. 30, 1:30 p.m. Mary Priestley
Some imported plants, whether brought here purposefully or incidentally, have become a real nuisance and threat to our natural heritage. Learn about them, their habits and how people are fighting back. Meet at the flagpole in front of Thompson Union for a one-mile easy walk.

Abbo's Alley
Sat., Oct. 6, 8:00 a.m. Mary Priestley
Early-birds are invited to this Parents' Weekend stroll. The Alley (Abbott Cotten Martin Ravine Garden) is always a treat, and its story involves much of Sewanee's history. Meet on the Quadrangle. One mile, easy.

Field and Forest Ramblings
Sat., Oct. 6, 10 a.m. Yolande Gottfried, Mary Priestley
The Herbarium is teaming up with the Tennessee Native Plant Society and South Cumberland State Recreation Area to sponsor this day of wildflower walks. A morning walk is scheduled for the Meadow Trail behind the Visitors Center at SCSRA. Here, a native plant meadow is being developed from a former golf course. After lunch at a restaurant in Monteagle, we plan to have an afternoon of bog-trotting on the Domain, featuring poison sumac, bottle gentian, turtlehead, cowbane, and numerous ferns. Meet at the SCSRA Visitors Center on TN Highway 56 between Monteagle and Tracy City. Easy.


Indian-tobacco

Homecoming Open House
Fri., Oct. 19, 4–5 p.m.
Join us to celebrate Sewanee's Big Trees. We will be unveiling the drawing that artist Kathryn Ramseur-Riley has created for our Search for the Big Trees project. The Herbarium is located on the ground floor of Woods Labs science building, near the greenhouse.

For information on these and other events, telephone:
Sewanee Herbarium (931) 598-3346 • South Cumberland State Recreation Area (931) 924-2956
Picking flowers and digging plants are prohibited in all of the above-mentioned natural areas.

Membership Application/Renewal

The Friends of the Sewanee Herbarium support the work of the Herbarium: education, research, and conservation. A $10.00 annual contribution would be very much appreciated. The date of your most recent contribution is printed on your address label.

Name and Address (if different from that on the mailing label on the back):

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Please make check payable to The University of the South. Gifts are fully tax deductible. Send to:

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Others who might like to receive *The Plant Press*: _____

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A New Plant Community on the Domain

University Forester Scott Torreano has found an interesting plant community on the side of the plateau in a TVA utility corridor just barely on the University Domain. This thin-soiled, limestone-based grassy community is similar to the "barrens" that are scattered farther out on the Eastern Highland Rim. A trip down there this fall resulted in the discovery of several plants heretofore unknown to the Domain, including two species listed as threatened in the state of Tennessee: compass plant (*Silphium laciniatum* L.) and a blazing star (*Liatris cylindracea* Michx.).

A telephone call to alert TVA to the rare plant populations brought a response from David Boyd, Sewanee graduate of the class of '75. David serves as this region's TVA right-of-way specialist, in charge of maintenance of the utility corridors criss-crossing much of the South Cumberland Plateau and the adjacent Eastern Highland Rim. He was delighted to hear about this find and anxious to have a look.

So, Associate Curator Yolande Gottfried, Assistant University Forester Joe Burckle, David, and I hiked down to the spot, armed with gps units, digital cameras, and rattlesnake chaps. The flora did not disappoint us. The rare plants were growing together in thin, bare, gravelly soil, along with whorled milkweed (*Asclepias verticillata* L.), gray-headed coneflower (*Ratibida pinnata* (Vent.) Barnhart), rose pink (*Sabatia angularis* (L.) Pursh), and tall-grass prairie grasses that included big bluestem (*Andropogon gerardii* Vitman) and Indian grass (*Sorghastrum nutans* (L.) Nash). Altogether, we found 14 plant species new to the Domain.

David's job involves numerous trips like this and conversations with people like us about the methods that TVA employs to maintain the corridors. While going about fulfilling their primary task of supplying electricity to homes and businesses, they consider a number of factors, including plants, wildlife, and aesthetics.

From our perspective as botanists, the preservation of biodiversity is a primary concern. TVA's current mode of maintaining this utility corridor by mechanical means seems to be the best course of action. Woody species are cut back, and wildflowers are allowed to thrive. They attract butterflies and other insects, and the insects attract birds. In this particular locale, very few invasive plants are in evidence, and the threatened plants appear to be doing well.

—Mary Priestley

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